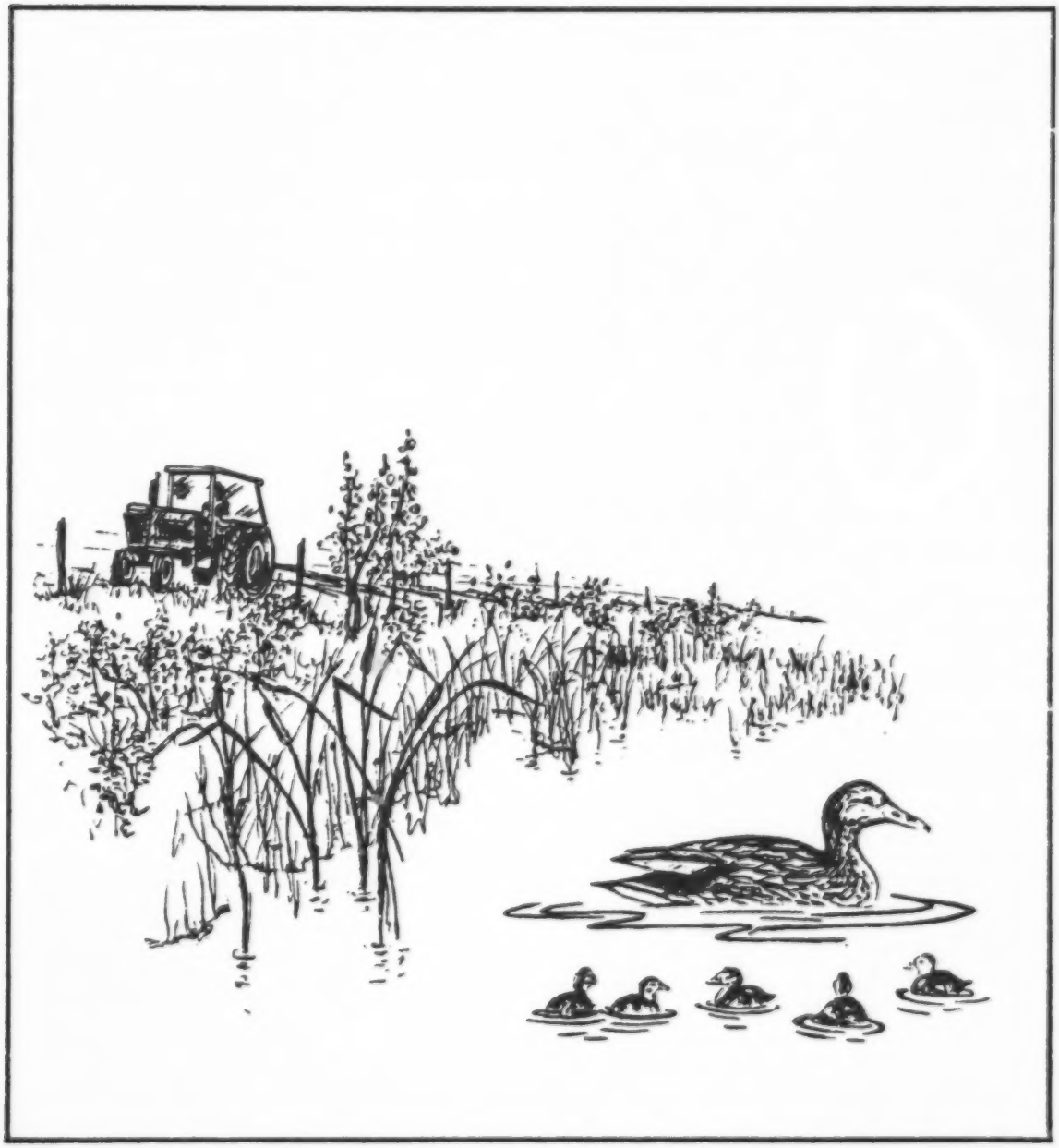
Saskatchewan
Parks and
Renewable
Resources

Wildlife Branch

Prairie Pothole Project-Phase II

Saskatchewan



Progress Report 87-1

PRAIRIE POTHOLE PROJECT
- PHASE II -
PROGRESS REPORT
(Sept. 1986 - Feb. 1987)

R. Russell, S. Barber, R. Melinchuk and M. Howland

Wildlife Branch
Saskatchewan Parks and Renewable Resources
3211 Albert Street
Regina, Saskatchewan

NOT FOR PUBLICATION

This technical report is for your information only with the understanding that its contents are not for general distribution or publication. The information contained herein remains the property of the Wildlife Branch, Department of Parks and Renewable Resources. Citations should be made only with the permission of the Wildlife Branch, 3211 Albert Street, Regina, Saskatchewan, S4S 5W6, Canada

EXECUTIVE SUMMARY

Phase II of the Prairie Pothole Project was officially initiated in September 1986 with the signing of an agreement between Wildlife Habitat Canada and the Province of Saskatchewan. Progress to date has been focused on completion of implementation strategy, communications plan and legal agreements.

Local interest in the project has been high and negotiations have proceeded well. Since January 1987, 44 landowners have requested habitat investigations of 26,600 acres (10,800 ha.) of land which represents 13% of the total area of the Rural Municipality of Antler. Biological evaluations have been completed on 136,000 acres (55,000 ha.). As of February 28, 1987, approximately 440 acres (180 ha.) of wetland habitat complexes have been secured under agreement.

Expenditures to date total $115,000 consisting primarily of the costs associated with project co-ordination and administration. Approximately 65% of Wildlife Habitat Canada's Year I grant to S.P.R.R. ($177,500) remains unexpended in the Fish and Wildlife Development Fund through which it is being administered. A recent commitment by Ducks Unlimited (Canada) to support the Prairie Pothole Project promises to reduce the level of support that will be requested from Wildlife Habitat Canada in future years.

Work during the next six months will be dominated by negotiations with landowners, the development of habitat on secured land and the implementation of the biological and socio-economic aspects of the Prairie Pothole Project.

CONTENTS

	Page
EXECUTIVE SUMMARY	i
1.0 BACKGROUND	1
2.0 PROJECT DEVELOPMENT	1
2.1 Implementation Strategy	2
2.2 Communications Plan	2
2.3 Inter-Agency Support	2
2.4 Legal Land Agreements	4
2.5 Agreement Processing	5
2.6 Evaluation Program	6
3.0 PROJECT OPERATION	6
3.1 Baseline Habitat Assessment	6
3.2 Landowner Negotiation	7
4.0 PROJECT EXPENDITURE	7
5.0 WORK PROJECTION	8
5.1 Administration	9
5.2 Communications	9
5.3 Biological	9
5.4 Negotiations	10
6.0 REFERENCES	11

Page

LIST OF TABLES

Table 1 - Man-day Expenditures on the Prairie Pothole Project (April 1/86 - Feb. 28/87) 7

Table 2 - Prairie Pothole Project Statement of Receipts and Disbursements (April 1/86 - Feb. 28/87) 8

LIST OF FIGURES

Figure 1 - Location of Project Area 1a

LIST OF APPENDICES

Appendix A - Communication Plan 12

Appendix B - Landowner Letter 15

Appendix C - Fact Sheet 16

Appendix D - Monitoring and Evaluation Plan 18

1.0 BACKGROUND

The purpose of this report is to summarize the progress of Phase II of the Prairie Pothole Project during the six month period September 1, 1986 to February 28, 1987. In addition, this report will outline project expenditures to date and work projections to September 1987.

Phase II of the Prairie Pothole Project was initiated in July 1986 based on an agreement between Wildlife Habitat Canada and Saskatchewan Parks and Renewable Resources for the first year of this five year study. Wildlife Habitat Canada is to granted S.P.R.R. $248,800 of the projected cost of the first year's operation and the Department will supply $83,000. This agreement was formalized September 11, 1986, the official start-up date for the project.

The goal of Phase II of the Prairie Pothole Project is to **evaluate the effectiveness of a system of financial and program incentives designed to induce Saskatchewan landowners to retain and enhance waterfowl habitat on their lands.** More specifically, the Prairie Pothole Project will attempt to evaluate nine major waterfowl habitat acquisition and development options which have potential application to the North American Waterfowl Management Plan.

Further background information on the project area (Figure 1) and the development of the Prairie Pothole Project can be found in earlier reports (Melinchuk and MacKay 1986, S.P.R.R. 1985, 1986a, 1986b).

2.0 PROJECT DEVELOPMENT

The implementation of Phase II of the Prairie Pothole Project has been dominated by the intensive efforts required to produce the Implementation Strategy (S.P.R.R. 1986b). Another major accomplishment has been the establishment of a network of support agencies to provide advice, technical support, and financial assistance to the project.

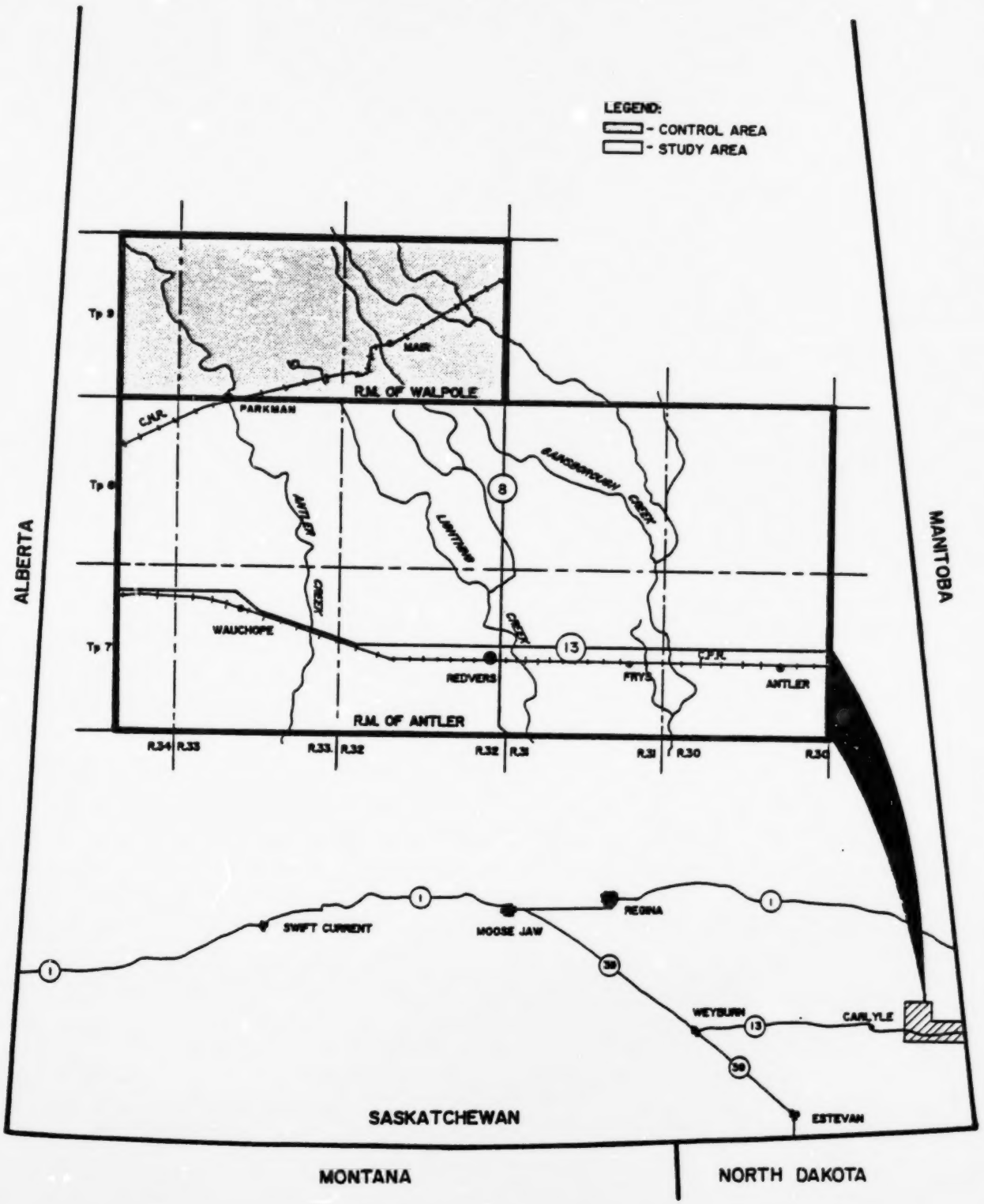


FIGURE I. LOCATION OF PROJECT AREA

2.1 Implementation Strategy

An Implementation Strategy was drafted to establish the procedures and guidelines to be followed during project implementation and to provide a basis for evaluation. This strategy was widely circulated among wildlife and agricultural agencies for review and comment. During the development of the strategy, every effort was made to gather state-of-the-art information about U.S. habitat retention programs and various waterfowl management techniques. Relevant conferences and workshops were attended as opportunities arose. As a result of this review, the project's goals and objectives and some of the habitat conservation options to be offered to landowners were refined and the report finalized in late November 1986. In early December, the strategy was approved by the Department and Wildlife Habitat Canada thereby permitting the initiation of landowner contacts before Christmas.

2.2 Communications Plan

A detailed Communications Plan (Appendix A) was developed to ensure the key public relations aspects of the project were effectively addressed. Implementation of this plan has resulted in the following accomplishments:

a) Establishment of a field office.
b) Distribution of landowner letters (Appendix B).
c) Development of a logo, caps, and signs.
d) Completion of a Project Fact Sheet (Appendix C).

2.3 Inter-Agency Support

The success of the Prairie Pothole Project will be influenced by the level of technical support and advice available from interested organizations and agencies. Solicitation of such inter-agency support has resulted in various levels of commitment from the following sources:

Rural Municipality of Antler #61

- Dissemination of project information.
- Provision of updated landownership lists.
- Co-sponsorship of public information/education activities.

Ducks Unlimited Canada

- Development of water-control structures.
- Provision of artificial nesting structures.
- Information/education assistance.

Canadian Wildlife Service

- Technical expertise and training of seasonal staff.
- Manpower for data analysis.
- $5,000/year for computer-assisted data analysis.
- $15-$20,000 in 1991 for computer-assisted data analysis and final report preparation.

Prairie Farm Rehabilitation Administration (P.F.R.A.)

- Technical expertise re: soils, erosion.
- Specialized equipment loans.
- Information/education assistance.
- Potentially $20,000 for program-compatible developments in 1986/87.

Technical Advisory Committee

Project advice will be provided by the following agencies represented on the Technical Advisory Committee:

- Saskatchewan Association of Rural Municipalities
- Canadian Wildlife Service
- Saskatchewan Agriculture

- Rural Municipality of Antler #61
- Wildlife Habitat Canada
- Saskatchewan Water Corporation
- Ducks Unlimited Canada
- Prairie Farm Rehabilitation Administration
- Saskatchewan Wildlife Federation
- Saskatchewan Parks and Renewable Resources

2.4 Legal Land Agreements

Five legal land agreements were developed by Wildlife, Resource Lands, and Department of Justice staff specifically for Phase II of the Prairie Pothole Project. Only one of these agreements is a lease which will be registered on the title as a caveat; the remaining four are licences. Licences will be utilized in instances where minimal interest in the land is necessary. Landowners will be required to sign a lease where a major capital investment occurs (nest cover plots). The five agreements are summarized as follows:

Agreement #1 is a 5 or 10 year licence agreement to be used to secure and idle non-cultivated lands. The agreement is not registered on the title.

Agreement #2 is a 5 or 10 year licence agreement to be used when securing non-cultivated lands that will be subject to either a) restricted or b) unrestricted haying or grazing. The agreement is not registered on the title.

Agreement #3 is a 10 year lease agreement to be used when securing cultivated lands and converting to nesting cover. A caveat is registered on the title.

Agreement #4 is a 10 year licence agreement to be used when securing cultivated lands and converting to idle cover or hayfields. The agreement is not registered on the title.

Agreement #5 is a perpetual licence agreement to be used when securing a wetland through the placement of an artificial nesting structure. This maintenance agreement is not registered on the title.

Purchase agreements will be sought for lands of exceptional waterfowl value through existing Wildlife Development Fund procedures and agreements. All purchases must receive Order-in-Council approval.

2.5 Agreement Processing

The Department's Resource Lands Branch will function in an administrative capacity for processing of project agreements. Although a detailed organizational flow chart has been developed to guide this process, the major steps involved in tracking each agreement are presented below:

a) Landowner signs agreement with land negotiator.
b) Project co-ordinator approval sought.
c) Assistant Deputy Minister signature and approval sought.
d) Resource Lands Branch (R.L.B.) extracts registry data from agreement (registers caveat where necessary), and enters pertinent information for each holding on computer file.
e) R.L.B. forwards agreement to Wildlife Development Fund (W.D.F.) administrator who is responsible for cheque disbursement to landowner from Fund.
f) Prior to annual cheque disbursement in following years, participants will be required to sign an "invoice" stating that the services specified in their lease agreement have been adhered to.

2.6 Evaluation Program

Development of the evaluation aspects of the project is now well-advanced. The Canadian Wildlife Service has proposed the intensive waterfowl population monitoring program outlined in Appendix D. Roadside transects have also been located in both the study area (R.M. of Antler) and a control area (adjacent rural municipality) and will be finalized once monitoring intensity has been adjusted to manpower availability and project objectives.

The socio-economic component of the evaluation will be designed and undertaken by the Canadian Plains Research Centre located at the University of Regina.

The Canadian Wildlife Service has also been pursuing incorporation of a pond margin restoration study and a rangeland management study into the Prairie Pothole Project. Further information on the design and implementation of these two programs will become available once suitable study sites have been secured throughout the project area.

3.0 PROJECT OPERATION

3.1 Baseline Habitat Assessment

False-color infrared photography (F.C.I.R.) and Landsat V satellite imagery have been obtained for the project area. Ducks Unlimited Canada provided the satellite imagery and was instrumental in co-ordinating the aerial photography contract. Project staff conducted ground-truthing for both photographic projects during the summer and fall of 1986.

To date 136,000 acres, representing two-thirds of the project area, has been assessed using F.C.I.R. and Landsat V imagery. Guidelines have been developed and potential sites selected for the placement of water-control structures, nest cover plots, and artificial nesting structures.

3.2 Landowner Negotiations

Forty-four (11%) of the project's landowners have volunteered 26,600 acres (13%) of the land base for inspection during the first ten weeks of field operation. Of this land, approximately 5,000 acres (2,025 ha.) did not meet the minimum habitat criteria established in the Implementation Strategy 1986b. Negotiations have resulted in three landowners signing agreements on 438 acres (177 ha.) of upland and wetland habitat. Neogtiations are currently in progress to secure an additional 1,000 acres (400 ha.)

4.0 PROJECT EXPENDITURES

Project expenditures are summarized in Tables 1 and 2 in terms of both man-day and financial costs.

TABLE 1: Man-day Expenditures on the Prairie Pothole Project (April 1/86 - February 28/87)

	Develop.	Admin.	Negot.	Eval.	Other	Total
Co-ordinator	125	62	---	---	21	208
Biologist	86	27	2	21	22	168
Negotiator	90	36	6	15	21	168
Secretarial	---	---	---	---	88	88
Administrative	22	11	---	---	---	33
Total	333	136	8	36	152	665

TABLE 2: Prairie Pothole Project - Statement of Receipts and Disbursements (April 1/86 - February 28/87)

	Total to Date
Receipts	
Wildlife Canada Grant	174,000.00
Interest Received	3,525.42
S.P.R.R. Contributions	82,940.00
	260,465.42
Disbursements	
Contractual Services	59,853.95
Consultant Fees	---
Surveys/Evaluations	1,100.50
Communication/Public Relations	964.89
Signs	---
Other Costs	1,084.39
Lease Fees	---
S.P.R.R. Salaries	43,659.86
Field Expenses	8,026.55
	114,690.14
Excess of Receipts over Disbursements	145,775.28

5.0 WORK PROJECTION (to September 1987)

Habitat assessments and land negotiations will dominate the work schedule of project staff until early April. The work will then shift to population monitoring and habitat developments through to September. A more detailed task breakdown follows.

5.1 Administrative

a) Contracts will be prepared to:

- hire socio-economic evaluation
- contract summer staff (April 1/87)
- secure agreement for Ducks Unlimited's participation in project (March 31/87)
- establish predator enclosures (Sept./87)
- order seed for cover plot and hayfield establishment (April 1/87)
- tender surveying, and development of works such as nest structures, etc. (June/87)

b) Technical Advisory Committee is expected to meet in March and July.

5.2 Communications

a) The Communications Plan (Appendix A) will be executed as outlined.

b) Presentations will be given to local and regional groups as required.

5.3 Biological

a) Habitat assessments will be completed by April/87 on the remaining quarter-sections in the R.M. of Antler. This will involve either initial screenings and/or detailed habitat evaluations.

b) Habitat developments will be implemented as required. Nest cover plot seeding will be completed by the spring of 1987. Nesting structures and predator enclosures will be installed throughout the spring and summer season.

c) Habitat and population monitoring will be completed by September 1987.

5.4 Negotiations

a) Negotiations should be at least 50% complete by September 1987.

b) Agreements will be processed on secured lands and flood easements obtained as required.

6.0 REFERENCES

Melinchuk, R. and R. Mackay. 1986 Prairie Pothole Project - Phase I. Wildl. Branch. S.P.R.R. 32 pp. unpubl.

Saskatchewan Parks and Renewable Resources. 1985. Prairie Pothole Project. Sask. Parks Renew. Resour. Unpubl. Rept. 19 pp.

_____. 1986a Prairie Pothole Project: Phase II - A proposal to Wildlife Habitat Canada. Sask. Parks Renew. Resour. Unpubl. Rept. 23 pp.

_____. 1986b Prairie Pothole Project: Phase II Procedures and Guidelines for Implementation. Wildl. Branch. S.P.R.R. 46 pp. unpubl.

APPENDIX A: POTHOLE PROJECT COMMUNICATION PLAN

The target audiences and associated communication vehicles are presented below. Cash costs will be borne by the Prairie Pothole Project; manpower resources will be drawn largely from contract and Wildlife Branch staff.

A. PROJECT AREA (R.M. of Antler at Redvers)

- landowners
- townspeople
- R.M. administration
- schools
- organizations

1. Feature Articles in Local Newspapers (ie. Redvers Optimist)

Feature articles in the local paper reporting on the progress of the project are suggested. As well, photographs are suggested to provide interesting visuals with the stories. Three papers in the area will likely run the stories at no charge. On some of the more important "occasions", a public relations person should be present to provide reporting and other promotional functions.

2. Fact Sheet (Initial)

A one-page fact sheet has been suggested as back-up information for personal visits and to be distributed from the R.M. office. The sheet would be one color, printed both sides, with one or two photographs.

3. Letter of Introduction

A letter introducing the project will be provided to all ratepayers in the R.M. to advise them of the program and its various components. This contact will also initiate the referral process for field staff who can then begin the evaluation and negotiational process.

4. Caps and Signs

Caps and farm-gate signs will be made available to all project participants, compliments of the project. They will bear a logo symbolizing the project.

5. Semi-Annual Report

The technical reports required by Habitat Canada will be condensed for public consumption. This condensed version may then be distributed to participating landowners in the R.M. of Antler to keep them informed of the project's progress.

6. Public Speaking/Video Presentation

We will be available to speak to various interest groups on the project. A video presentation would be useful in this connection.

7. Conferences/Field Days

Conferences and field days with conservation themes may be promoted in the project area depending on local interest and the development of demonstration sites. These conferences and/or field days will serve to stimulate local interest and awareness in conservation farming, the Prairie Pothole Project, and wildlife in general.

B. S.P.R.R.

1. Monthly and semi-annual progress reports.
2. Wildlife Supervisor's meetings.
3. Continuing liaison with Lands and Communications Branches.
4. Wildlife Bulletin.
5. Continuing contact with Melville Region Wildlife staff (and thus to region).
6. Dispatch articles.

C. CO-OPERATING AGENCIES AND ORGANIZATIONS

1. Technical advisory committee (quarterly meeting).
2. Semi-annual progress report.

D. GENERAL PUBLIC

1. News releases within context of North American Waterfowl Management Plan.
2. Grant media interviews, as they are requested.
3. Respond to individual (eg. landowner) inquiries with complete information.
4. Feature articles directed towards agricultural-oriented magazines such as the Western Producer as well as conservation publications such as Ducks Unlimited's Conservator magazine.

E. NATIONAL AND INTERNATIONAL ORGANIZATIONS

1. Provide provincial news releases.
2. Communicate via North American Waterfowl Management Plan infrastructure.

APPENDIX B: Landowner Letter

December 5, 1986

Dear Ratepayer:

As you may be aware, Saskatchewan Parks and Renewable Resources' staff talked to a number of farmers in the Rural Municipality of Antler last year. Results of these discussions have led to the development of the Prairie Pothole Project to be introduced in your R.M. this month.

This five year project is designed to encourage landowners to preserve waterfowl habitat on their land in exchange for financial compensation and certain soil and water conservation incentives. Dwindling waterfowl populations across Saskatchewan have prompted the development of this wildlife-agriculture project which, if successful, may be applied to other parts of the province with similar waterfowl potential.

This project is a joint undertaking between Saskatchewan Parks and Renewable Resources and Wildlife Habitat Canada, and receives advice from your R.M. Council, P.F.R.A., Saskatchewan Agriculture and the Saskatchewan Wildlife Federation.

As a ratepayer in the project area you have an opportunity to participate in this project. Should you want more information or wish to become involved in the project, feel free to drop into our office in the Redvers Agencies Building in Redvers (on Fridays), or phone 452-6060 at your convenience. We'll also be contacting landowners in the coming weeks.

Thank you for your time and consideration. We are looking forward to talking to you in the near future.

Sincerely

R. Melinchuk

Ross Melinchuk
Co-ordinator
Prairie Pothole Project

Saskatchewan Parks and Renewable Resources
Hon. Colin Maxwell
Minister

Prairie Pothole Project Fact Sheet

Across North America, waterfowl managers are facing a common problem: declining waterfowl populations. Much of this decline is related to the loss of natural nesting habitat, as farmers are pressed by economic conditions to put more of their land into production.

Saskatchewan, of course, faces the same problem, so a pilot project has been designed to find some of the answers needed to halt this decline.

The aim of the Prairie Pothole Project is to determine the best ways to retain and enhance waterfowl habitat on private land. The project will take place in the Rural Municipality of Antler #61, near Redvers, an area typical of the important duck habitat provided by parkland Saskatchewan. It is being implemented by Saskatchewan Parks and Renewable Resources with support from Wildlife Habitat Canada, Ducks Unlimited (Canada) and the Canadian Wildlife Service.

A variety of financial incentives will be offered to landowners in the project area to preserve sloughs and upland nesting cover, and to create new nesting cover. Technical and financial assistance will also be offered to landowners experiencing problems such as erosion and salinity.

The waterfowl production of secured habitat will be increased through use of methods such as:

- fencing to keep predators from nests;
- small, low-level dams to provide brood water; and
- placing nest baskets in areas where lack of natural cover makes it nearly impossible for ducks to nest successfully.

Close attention will be paid to crop damage and prevention programs will be instituted if necessary.

The Prairie Pothole Project will evaluate landowner acceptance of these initiatives, and will determine the most efficient duck-producing methods for Saskatchewan parkland. The results may be put to use on a much larger scale if the North American Waterfowl Management Plan is implemented in the province. This U.S. - Canada plan seeks to restore North American waterfowl numbers to their mid-1970 levels.

Prairie Pothole Project staff are available at their Redvers office (452-6060) to answer landowner questions regarding the project. They will also be contacting landowners who control habitat of interest to the project.

APPENDIX D: General Monitoring and Evaluation Plan for the Prairie Pothole Project

Preliminary Recommendations - Methodology:

1. Study Areas - Rural Municipality of Antler (312 mi^2) and the Rural Municipality of Walpole. Stratified into sub-areas.

   a) Antler Study Area

      Establish 12-line transects along secondary roads - each ¼ x 10 miles or 120 miles. Locate one transect in each of 12 sub-areas differentiated on the basis of pothole density, distribution of permanent ponds and extent of land clearing.

   b) Walpole Control Area

      Establish five (or six) ¼ x 10 mile transects on stratified sub-areas (one per sub-area). Total transect length = 170 miles.

2. Social Index Pair Surveys

   Vehicle surveys of visible ponds for breeding pairs and drakes every five days on all transects starting as early as April 7, and extending until June 15.

3. Pair Beat-out Surveys

   One beat-out census for breeding pairs is to be conducted on all transects (⅛ mile width) in mid-May (when pair - lone drake ratios are optimum).

4. Social Index Brood Surveys

   Social index brood surveys (from vehicle) should be conducted every ten days beginning June 15 and ending August 15.

5. Wetland Habitat Surveys

   Habitat appraisals of ponds and associated margins should be conducted once during the beat-out census in May.

6. Upland Habitat Surveys

   Habitat surveys to be conducted on blocks of upland nesting cover (native idle, pasture, hayland), distributed along transects (mid-May or early June). Cover types are to be sampled with a Robel pole to obtain height-density measurements.

7. Dense Nesting Cover Plots (Nest Drags)

   On ten DNC plots, fenced by Saskatchewan Parks and Renewable Resources (each approximately 40 acres), nest drags should be conducted at three week intervals starting in early May and ending in late June (three searches). Total area = 400 acres.

8. Miscellaneous Cover Types (Nest Drags)

Nest drags are to be conducted on a number of 1/8 x 1 mile segments on each transect. Selection of segments is based upon a stratified random process. All upland cover types are to be searched three times during the nesting season.

9. Wetland Margin Study

Recommend that the wetland margin study being initiated by Canadian Wildlife Service be incorporated into the Prairie Pothole Project, time and resources permitting.